

1636

MR929-911

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant:	Yaoguang Liu	:	Group
Serial No:	10/658,286	:	Art Unit #1636
Filed:	10 September 2003	:	Examiner
Title:	METHOD FOR PRODUCING A MULTI-GENE RECOMBINANT VECTOR CONSTRUCT AND THE APPLICATION		Unknown

INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The Applicant wishes to make the following art references of record in the above-identified Patent Application pursuant to 37 C.F.R. §§ 1.97 and 1.98, and to the Duty of Disclosure set forth in 37 C.F.R. § 1.56.

Although the information submitted herewith may be "material" to the Examiner's consideration of the subject Patent Application, this submission is not intended to constitute an admission that such information is "prior art" as to the claimed invention.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search was made or that no other material information, as defined in 37 C.F.R. § 1.56(b), exists.

Cited Publications are:

<u>Ref. No.</u>	<u>Description</u>
A	ALBERT H. et al., "Site-Specific Integration of DNA into Wild-Type and Mutant Lox Sites Placed in the Plant Genome.", Plant J., Apr. 07, 1995, pp. 649-659, Plant Gene Expression Center, USDA/ARS-UC Berkeley, Albany USA.,
B	McLEOD M. et al., "Identification of the Crossover Site During FLP Mediation Recombination in the Saccharomyces Cerevisiae Plasmid 2 Microns Circle.", Mol Cell Biol., Oct. 06, 1986, p. 3357-3367
C	VAN ENGELLEN FA. Et al., "Coordinate Expression of Antibody Subunit Genes Yields High Levels of Functional Antibodies in Roots of Transgenic Tobacco.", Plant Mol Biol., Dec. 36, 1994, pp. 1701-1710, Centre for Plant Breeding and Reproduction Research (CPRO-DLO), Department of Molecular Biology, Wageningen, The Netherlands
D	MARLENE BELFORT et al., "Homing Endonucleases: Keeping the House in Order.", Nucleic Acids Research, 1997, pp. 3379-3388, Vol. 25, No. 17, Oxford University Press, Albany New York
E	LILI CHEN et al., "Expression and Inheritance of Multiple Transgenes in Rice Plants.", Nature Biotechnology, Nov. 1998, pp. 1060-1064, Vol. 16, International Laboratory for Tropical Agricultural Biotechnology, Tel Aviv, Israel.
F	HENRY DANIELL et al., "Multigene Engineering: Dawn of an Exciting New Era in Biotechnology", Current Opinion in Biotechnology., Feb. 25, 2002, pg/p. 136-141, Vol. 13, Elsevier Science LTD., Orlando Florida.
G	CAROL M. HAMILTON, "Abinary-BAC System for Plant Transformation with High-Molecular-Weight DNA.", Gene, An International Journal on Genes and Genomes, 1997, pp. 107-116, Elsevier Science B.V., Ithica New York.
H	CLAIRE HALPIN et al., "Enabling Technologies for Manipulating Multiple Genes on Complex Pathways.", Plant Molecular Biology, 2001,

pp. 295-310, Vol. 47, Kluwer Academic Publishers, The Netherlands.

- I CATHERINE LAPIERRE et al., "Structural Alterations of Lignins in Transgenic Poplars with Depressed Cinnamyl Alcohol Dehydrogenase or Caffeic Acid O-Methyltransferase Activity Have an Opposite Impact on the Efficiency of Industrial Kraft Pulping.", *Plant Physiology*, Jan. 1999, pp. 153-163, Vol. 119, American Society of Plant Physiologists
- J YAO-GUANG LIU et al., "Complementation of Plant Mutants with Large Genomic DNA Fragments by a transformation-Competent Artificial Chromosome Vector Accelerates Positional Cloning.", *Plant Biology*, May 1999, pp. 6535-6540, Vol. 96, Proceedings of the National Academy of Sciences.
- K JULIAN K.-C. MA et al., "Generation and Assembly of Secretory Antibodies in Plants.", *Science*, May 05, 1995, pp. 716-719, Vol. 268
- L A.C. MCCORMAC et al., pBECKS2000: A Novel Plasmid Series for the Facile Creation of Complex Binary Vectors Which incorporates "clean-Gene" Facilities.", *Molecular and General Genetics*, 1999, pp. 226-235, Vol. 261, Springer-Verlag
- M HOWARD A. NASH, "Integration and Excision of Bacteriophage: The Mechanism of Conservative Site Specific Recombination.", *Annual Review of Genetics*, 1981, pp. 143-167, Vol. 15
- N HIROAKI SHIZUYA et al., "Cloning and Stable Maintenance of 300-Kilobase-Pair Fragments of Human DNA in Escherichia Coli using an F-Factor-Based Vector.", *Proceedings of the National Academy of Sciences*, Sep. 1992, pp. 8794-8797, Vol. 89
- O NAT STERNBERG et al., "Bacteriophage P1 Site-Specific Recombination", *Journal of Molecular Biology*, 1981, pp. 487-507, Vol. 150
- P Nat Sternberg, "Bacteriophage P1 Cloning System for the Isolation, Amplification, and Recovery of DNA Fragments as Large as 100 Kilobase Pairs.", *Proceedings of the National Academy of Sciences*, Jan. 1990, pp. 103-107, Vol. 87

Q XUDONG YE et al., "Engineering the Provitamin A (B-Carotene) Biosynthetic Pathway into (Carotenoid-Free) Rice Endosperm.", Science, Jan. 14, 2000, pp. 303-305, Vol. 287

This Information Disclosure Statement is being filed more than three months subsequent to the Filing Date of the subject Patent Application, but before the mailing of a first Office Action.

A Form PTO-1449 and copies of the references are submitted along with this document. It is requested that the Examiner consider the references and make them of record in the above-referenced Patent Application.

Respectfully submitted,  
FOR: ROSENBERG, KLEIN & LEE



David I. Klein  
Registration #33,253

Dated: 10 Feb. 2004

Suite 101  
3458 Ellicott Center Drive  
Ellicott City, MD 21043  
(410) 465-6678



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Applicant Number	10/658,286
Filing Date	Sep. 10, 2003
First Named Inventor	YAOGUANG LIU
Art Unit	1636
Examiner Name	
Attorney Docket Number	MR929-911

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	A✓	ALBERT H. et al., "Site-Specific Integration of DNA into Wild-Type and Mutant Lox Sites Placed in the Plant Genome.", Plant J., Apr. 07, 1995, pp. 649-659, Plant Gene Expression Center, USDA/ARS-UC Berkeley, Albany USA.	
	B✓	McLEOD M. et al., "Identification of the Crossover Site During FLP-Mediation Recombination in the Saccharomyces Cerevisiae Plasmid 2 Microns Circle.", Mol Cell Biol., Oct. 06, 1986, p. 3357-3367	
	C✓	VAN ENGELN FA. et al., "Coordinate Expression of Antibody Subunit Genes Yields High Levels of Functional Antibodies in Roots of Transgenic Tobacco.", Plant Mol Biol., Dec. 36, 1994, pp. 1701-1710, Centre for Plant Breeding and Reproduction Research (CPRO-DLO), Department of Molecular Biology, Wageningen, The Netherlands.	
	D✓	MARLENE BELFORT et al., "Homing Endonucleases: Keeping the House in Order.", Nucleic Acids Research, 1997, pp. 3379-3388, Vol. 25, No. 17, Oxford University Press, Albany New York	
	E✓	LILI CHEN et al., "Expression and Inheritance of Multiple Transgenes in Rice Plants.", Nature Biotechnology, Nov. 1998, pp. 1060-1064, Vol. 16, International Laboratory for Tropical Agricultural Biotechnology, Tel Aviv, Israel.	
	F✓	HENRY DANIELL et al., "Multigene Engineering: Dawn of an Exciting New Era in Biotechnology", Current Opinion in Biotechnology., Feb. 25, 2002, pp. 136-141, Vol. 13, Elsevier Science LTD., Orlando Florida.	
	G✓	CAROL M. HAMILTON, "Abinary-BAC System for Plant Transformation with High-Molecular-Weight DNA.", Gene, An International Journal on Genes and Genomes, 1997, pp. 107-116, Elsevier Science B.V., Ithica New York.	
	H✓	CLAIRE HALPIN et al., "Enabling Technologies for Manipulating Multiple Genes on Complex Pathways.", Plant molecular Biology, 2001, pp. 295-310, Vol. 47, Kluwer Academic Publishers, The Netherlands.	
	I	CATHERINE LAPIERRE et al., "Structural Alterations of Lignins in Transgenic Poplars with Depressed Cinnamyl Alcohol Dehydrogenase or Caffeic Acid O-Methyltransferase Activity Have an Opposite Impact on the Efficiency of Industrial Kraft Pulp.", Plant Physiology, Jan. 1999, pp. 153-163, Vol. 119, American Society of Plant Physiologists	
	J	YAO-GUANG LIU et al., "Complementation of Plant Mutants with Large Genomic DNA Fragments by a transformation-Competent Artificial Chromosome Vector Accelerates Positional Cloning.", Plant Biology, May 1999, pp. 6535-6540, Vol. 96, Proceedings of the National Academy of Sciences.	

Examiner Signature	Date Considered
--------------------	-----------------

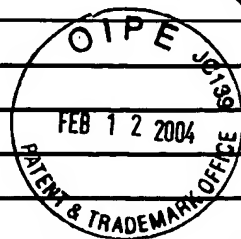
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>			
		Applicant Number	10/658,286		
		Filing Date	Sep. 10, 2003		
		First Named Inventor	YAOGUANG LIU		
		Art Unit	1636		
		Examiner Name			
Sheet	2	of	2	Attorney Docket Number	MR929-911



NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	K	JULIAN K.-C. MA et al., "Generation and Assembly of Secretary Antibodies in Plants.", Science, May 05, 1995, pp. 716-719, Vol. 268	
	L	A.C. MCCORMAC et al., pBECKS2000: A Novel Plasmid Series for the Facile Creation of Complex Binary Vectors, Which incorporates "clean-Gene" Facilities.", Molecular and General Genetics, 1999, pp. 226-235, Vol. 261, Springer-Verlag	
	M	HOWARD A. NASH, "Integration and Excision of Bacteriophage: The Mechanism of Conservative Site Specific Recombination.", Annual Review of Genetics, 1981, pp. 143-167, Vol. 15	
	N	HIROAKI SHIZUYA et al., "Cloning and Stable Maintenance of 300-Kilobase-Pair Fragments of Human DNA in Escherichia Coli using an F-Factor-Based Vector.", Proceedings of the National Academy of Sciences, Sep. 1992, pp. 8794-8797, Vol. 89	
	O	NAT STERNBERG et al., "Bacteriophage P1 Site-Specific Recombination", Journal of Molecular Biology, 1981, pp. 487-507, Vol. 150	
	P	NAT STERNBERG, "Bacteriophage P1 Cloning System for the Isolation, Amplification, and Recovery of DNA Fragments as Large as 100 Kilobase Pairs.", Proceedings of the National Academy of Sciences, Jan. 1990, pp. 103-107, Vol. 87	
	Q	XUDONG YE et al., "Engineering the Provitamin A (B-Carotene) Biosynthetic Pathway into (Carotenoid-Free) Rice Endosperm.", Science, Jan. 14, 2000, pp. 303-305, Vol. 287	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.